00:00:00.000 --> 00:00:01.250
Ulrich, Elin
All right.

00:00:02.280 --> 00:00:07.390
Ulrich, Elin
And I'm looking at the transcript. I don't want to see my softalk perfect that's gone.

00:00:09.300 --> 00:00:11.160
Ulrich, Elin
Just to kick things off.

00:00:12.000 --> 00:00:33.890
Ulrich, Elin
Come for the EPA folks on the call Dan reached out to me a while back and said. Hey there's this facility in Nebraska. That's causing some environmental concerns. Are you interested in helping us on this project and I said that sounds like a lot of the some some stuff that we're already working on yeah, we should talk.

00:00:34.360 --> 00:01:05.210
Ulrich, Elin
Uh I have reached out to some people who are on this call because I thought they might be interested. That's gotten forwarded some other work. That's internal to EPA that involves Region 7 and some air monitoring has been circulating around those people got invited if you are listening into this and don't think that this is applicable to you by all means. Feel free to drop off the call send me an email, I won't keep bothering you about this.

00:01:05.520 --> 00:01:18.750
Ulrich, Elin
I want it to be more inclusive for this meeting than try to exclude it and make sure I had the right list. So I just invited everybody to make sure I didn't miss anyone so I apologize if you've been included and don't really need to be.

00:01:19.660 --> 00:01:27.700
Ulrich, Elin
But again that that was just partially from my own lack of understanding all the different pieces. It's starting to become clear to me.

00:01:28.920 --> 00:01:51.480
Ulrich, Elin
Additionally, I have had some conversations with some of the folks in Region 7 and if Ord is getting involved in a project like this. We need to be really careful to make sure that the region in that area is aware of what's going on and that there are no surprises. And so Candace had her name up here. A second ago and I've lost it.

00:01:52.360 --> 00:02:10.760
Ulrich, Elin
Candace is the regional person that I believe is the right contact. Candace Bednar and she would very

much appreciate if we could keep her in the loop on any collaborations that we get started on and and just to make sure that.

00:02:11.360 --> 00:02:35.250
Ulrich, Elin
Regent 7 is aware and that they can also make the folks in Nebraska, the state. The nde and somebody is going to have to remind me the Nebraska Department of Environment and energy excellent. I'm passing acronyms. Today, some days. I don't so we want to make sure that there are no surprises for either the region or for.

00:02:23.590 --> 00:02:24.010
Daniel Snow
Yeah.

00:02:23.700 --> 00:02:24.040
Shannon Bartelt-Hunt
Uh-huh.

00:02:35.300 --> 00:02:59.330
Ulrich, Elin
Or Nebraska this state nde so just please make sure that if you are involved in this and that we do start a collaboration that that that communication stays good and finally this is a conversation to get the ball rolling to discuss possibilities. I don't think anybody is committing to anything today.

00:02:59.870 --> 00:03:20.090
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:03:20.520 --> 00:03:43.820
Ulrich, Elin
Come get it into the straps so that there are no questions about what we're working on and your time commitments and all of that kind of stuff, so I wanted just to make sure that I dotted those eyes and Cross. Those Tees before we, we launched into a good discussion about the science so that nobody gets in trouble and nobody gets their hand slapped. We don't over commit we don't over. Promise or anything like that so.

00:03:45.300 --> 00:04:14.920
Ulrich, Elin
There are a ton of EPA focus on this call. I would hesitate to try and go around the room and introduce everybody from EPA because I think that would take us. Most of the meeting, so I would prefer to let Shannon and Dan introduced themselves since they are primary Contacts at the University of Nebraska Lincoln and then turn the floor over that to them to give a little bit of an introduction with what kind of work, they're doing, and what needs they have and.

00:04:15.360 --> 00:04:23.940
Ulrich, Elin

Or we might be able to assist and and advance. This research so I'm going to start with the Shannon 'cause, you're blinking and then we'll let Dan go.

00:04:24.360 --> 00:04:45.650
Shannon Bartelt-Hunt
OK, I don't know why I'm blanking but everyone. I'm Shannon Bartelt Hunt. I'm a professor and Department chair in the Department of civil and environmental engineering in the College of engineering at the University. Nebraska my research focuses on largely physical chemical fate and transformation of organic contaminants in the environment.

00:04:46.240 --> 00:05:08.080
Shannon Bartelt-Hunt
Collaborate a lot with Dan and and my role in this are kind of site assessment of the area surrounding Alta and we're not really working on the facility site. But in the surrounding community where the waste has been land applied is collecting environmental samples soil.

00:05:08.340 --> 00:05:21.710
Shannon Bartelt-Hunt
Uhm water surface water moving toward groundwater and then trying to interpret the data to understand offsite movement of the Neo Nicotine Hayden Fungicide fungicide compounds.

00:05:24.760 --> 00:05:32.760
Daniel Snow
Hi everyone, I'm dance, no, I'm a research professor at the University and director of the water Sciences laboratory.

00:05:34.620 --> 00:05:47.730
Daniel Snow
Obviously, I'm I'm working more from the analytical standpoint, we have methods in our facility for measuring a lot of the pesticides and degradation products that were released at this site.

00:05:48.620 --> 00:06:18.390
Daniel Snow
Actually, where I was involved with several research projects near the Alten facility way before all 10 came into being so we have some background data from those research projects for those of you that are not aware of their is at University property. That's located within about a mile of the Alton facility, which is one reason we discovered it is that we were conducting research at the East Eastern Research and Extension Center.

00:06:18.920 --> 00:06:35.240
Daniel Snow
Uh and found very high levels of neonicotinoid insecticides in the dust. Obviously, there was problems with be colonies. On the University property and that sort of led to discovering what was going on at the Elton Facility.

00:06:39.840 --> 00:06:58.100
Ulrich, Elin
Awesome I hesitate again to try to dive into the background of this facility. I have shared quite a bit of

documentation. There's plenty of websites that you can type in alt end and find a background information so.

00:06:58.150 --> 00:07:04.400
Ulrich, Elin
Uhm Dan and we're Shannon could you just kind of describe what kinds of?

00:07:05.400 --> 00:07:14.980
Ulrich, Elin
Things you're looking for help on and how EPA Ord could be of assistance collaborate.

00:07:17.530 --> 00:07:21.710
Shannon Bartelt-Hunt
Sure, do you wanna have oh here? Let me go first OK? I was gonna let you go first but that's fine?

00:07:17.660 --> 00:07:18.950
Daniel Snow
No, I can't go first.

00:07:22.260 --> 00:07:31.350
Shannon Bartelt-Hunt
Uhm yeah, so I can so kind of in a very broad stroke. We have a interdisciplinary group that's looking at.

00:07:33.420 --> 00:07:42.780
Shannon Bartelt-Hunt
Contaminant migration from offsite areas where the wastewater and wet cake from the Alton facility was land applied.

00:07:43.460 --> 00:07:58.430
Shannon Bartelt-Hunt
Uhm there's also interest in kind of regional potential for impact groundwater from the the lagoons on the site that are or have been leaking and I think are still kind of in a a state of.

00:07:59.030 --> 00:08:03.320
Shannon Bartelt-Hunt
Uhm disrepair, although they're trying to move some of that waste water out of those lagoons.

00:08:03.380 --> 00:08:09.100
Shannon Bartelt-Hunt
Some kind of as we speak, so, so there's a group focusing on.

00:08:10.330 --> 00:08:35.750
Shannon Bartelt-Hunt
Uh so Judy was smart, and is focusing on effects to bees in the in the area, which was kind of the Sentinel Organism that tipped everyone off that there were issues and the surrounding site. There are faculty working on other you know effects to other types of organisms and using other organisms as kind of indicators Redwing Blackbirds and Bullfrog Tadpoles, I think are the.

00:08:36.570 --> 00:08:53.170
Shannon Bartelt-Hunt
Dominant organisms that they're looking at Dan and I are more on the tracing of the contaminant side, So what we're finding we've done surface water sampling kind of over the sampling season April when this kind of came on everyone 's radar March, April till.

00:08:53.790 --> 00:08:54.840
Shannon Bartelt-Hunt
Uh November.

00:08:55.430 --> 00:09:02.160
Shannon Bartelt-Hunt
And in kind of kind of regionally, but following a couple of the dominant flow paths off the site.

00:09:03.590 --> 00:09:35.330
Shannon Bartelt-Hunt
And toward the Platte River. We've done some surface soil sampling very recently, and also have done some surface soils and a couple of the monitoring wells at a cattle feed lot. That's just adjacent to the property, but our goal is to try to get better understanding of how the compounds from the waist are kind of being disseminated through the environment in and around the community of Mead and kind of the larger.

00:09:35.380 --> 00:09:39.470
Shannon Bartelt-Hunt
Area so dans methods, which I'll let him describe.

00:09:40.110 --> 00:09:51.890
Shannon Bartelt-Hunt
Include a lot of the parent neonicotinoid and fungicide compounds as well as a number of degradation products and from a research perspective.

00:09:53.670 --> 00:10:02.160
Shannon Bartelt-Hunt
I think this unfortunately becomes a really interesting case site because you have extremely high concentrations at the land surface.

00:10:02.790 --> 00:10:23.470
Shannon Bartelt-Hunt
And so it becomes an opportunity to look for you know transformation products and maybe some non targeted analysis just through through soil and surface water. I mean, this, the the waste has kind of been spread all around the area and it seems to be impacting.

00:10:23.910 --> 00:10:53.450
Shannon Bartelt-Hunt
Uhm surface water we don't know yet what our soil data. We've just collected the samples a couple weeks ago and there's some kind of pinpoint hits in groundwater. But those haven't been done by our team. They've been done more by NDE or other labs and so methods are different. They're not quite as

sensitive. They're not tracking the degradation products so we still have a lot of questions around what we may find in groundwater when we do our own sampling so I think the from A.

00:10:54.250 --> 00:11:11.690
Shannon Bartelt-Hunt
You know, we're invested in this project because there's really strong community interest to understand what you know what compounds are in and around homes and you know where people are living and then also from a research perspective. I think we're very interested in this as just a.

00:11:12.370 --> 00:11:24.170
Shannon Bartelt-Hunt
Almost like a worst case scenario or you have just a concentration of these compounds from how the you know treated seed was being processed and brought to this one facility.

00:11:24.920 --> 00:11:55.130
Shannon Bartelt-Hunt
And then the waist really just being essentially piled up at that facility both in terms of the solid waste and the waste water. You have this very concentrated area with a lot of these compounds kind of present at the land surface so from a research perspective. I think we're interested in transport. You know predominantly. I think subsurface transport through the vadose zone with the potential for what's the potential to impact groundwater and just you know.

00:11:55.280 --> 00:11:57.950
Shannon Bartelt-Hunt
What we are seeing generally as?

00:11:58.440 --> 00:12:10.370
Shannon Bartelt-Hunt
And still the presence of the parent compounds, but we're still seeing kind of persistence of degradation products and so I think we're interested in understanding those transformation processes.

00:12:11.700 --> 00:12:19.710
Shannon Bartelt-Hunt
And are there other you know transformation products or not identifying because they're not currently currently part of the methods. Dan I'll let you add on to that.

00:12:21.340 --> 00:12:29.930
Daniel Snow
Send you covered pretty much everything I was gonna mention one thing I think EPA could help us a lot with is the Atmospheric.

00:12:30.650 --> 00:12:51.400
Daniel Snow
Uh occurrence in transport, particularly for human exposure, which I think that would be the most important route for exposure from these contaminants. So air sampling. We have a limited number of aerosol samples from around the Alten facility. We have some wipe samples that were currently processed.

00:12:52.020 --> 00:13:07.830
Daniel Snow
Uh dust samples, obviously is another route of exposure that we're really not equipped to to handle through our laboratory. So anything related to the air, which I think Collyn That's something you're especially interested in would be most welcome.

00:13:08.670 --> 00:13:19.340
Daniel Snow
Uh and again that the degradation products and then identification of things that we're not quantifying using our our triple quadrupole Ms methods that would be extremely helpful.

00:13:22.690 --> 00:13:44.160
Ulrich, Elin
Great my recollection from some previous discussions were that some modeling and ecological issues might be of interest as well. So if you could touch on that I'm I'm remembering those but I don't want to speak for you guys so if those are still of interest. Please chime in with those.

00:13:40.530 --> 00:13:40.820
Daniel Snow
Yeah.

00:13:44.640 --> 00:13:53.830
Daniel Snow
Yeah, so when we mentioned the modeling earlier. We were interested in atmospheric deposition so if we can model.

00:13:55.040 --> 00:14:24.610
Daniel Snow
Save the facility is this is a point source and then air deposition away from that point source to give us an idea of how that the contaminants might be distributed through atmospheric deposition that could be helpful. Shannon and her team are doing some hydros subsurface modeling. I don't think we have anybody that's doing surface water transport modeling right now, so if if there's somebody that wants to do that have at it 'cause there's plenty of.

00:14:25.220 --> 00:14:26.700
Daniel Snow
There's plenty of surface water.

00:14:27.440 --> 00:14:33.020
Daniel Snow
That that could be modeled to better understand what's going on on the surface side of things.

00:14:34.660 --> 00:14:36.170
Daniel Snow
What was the other thing that you mentioned?

00:14:37.730 --> 00:14:38.960
Ulrich, Elin
I was thinking about.

00:14:42.480 --> 00:14:45.970
Ulrich, Elin
A little bit more on the effects side as well and.

00:14:44.940 --> 00:14:45.230
Daniel Snow
Yeah.

00:14:47.070 --> 00:14:58.930
Daniel Snow
So Judy Wu Smart, she's a random Ologist That's leading the effort. She would be very helpful happy to have anyone and everyone that's interested in the ecological effects.

00:14:59.230 --> 00:14:59.710
Ulrich, Elin
Was it?

00:15:00.040 --> 00:15:04.370
Daniel Snow
Look at the routes of exposure to insects.

00:15:05.410 --> 00:15:21.590
Daniel Snow
Ways to to sample and demonstrate routes of exposure and then the ecological effects. Of course, 2 species beyond the bees is something that we're really not even considering here. I think that's something that we would welcome help with.

00:15:24.070 --> 00:15:33.630
Ulrich, Elin
I know quite a few of the folks that I've invited are more on the ecological effects in water side is that something of interest.

00:15:33.940 --> 00:15:40.950
Daniel Snow
Yeah, Liz Liz Hand warmer is she's got a couple of students that are doing the sampling for the Tadpoles.

00:15:34.980 --> 00:15:35.300
Ulrich, Elin
OK.

00:15:41.740 --> 00:15:42.310
Daniel Snow
Uhm.

00:15:42.110 --> 00:15:42.420
Ulrich, Elin
OK.

00:15:43.550 --> 00:15:55.450
Daniel Snow
But you know, she's got her hands full basically with just doing the sampling site. If there's people that want to help with that effort. We've got some students here we're getting started on that sampling effort.

00:15:56.080 --> 00:16:02.020
Daniel Snow
Have at it, you know that that's we've got a whole whole area on the ecological side that we could use some help with?

00:16:02.830 --> 00:16:03.180
Ulrich, Elin
Great.

00:16:04.840 --> 00:16:07.120
Ulrich, Elin
I remembered that this could be very broad.

00:16:08.370 --> 00:16:22.530
Ulrich, Elin
And and that covers a lot of the ground and a lot of the folks that I think are on the call today. So I'm gonna try to be quiet and let folks ask further questions propose ideas.

00:16:23.510 --> 00:16:26.710
Ulrich, Elin
Remembering that nothing is set in stone at this moment.

00:16:38.220 --> 00:17:00.350
Newton, Seth
Ah, I can start I guess I this discussion brings up 2 ideas that I think we've been wanting to apply in non targeted analysis for awhile. One is the use of transformation or metabolite prediction tools. Combined with non target analysis to discover transformation products that's a no brainer there's a.

00:17:01.390 --> 00:17:19.980
Newton, Seth
There's a tool uh that's was developed within or D that predicts transformation products. I forget what it's called but we keep talking about trying to apply. It yeah, and along with non targeted to discover transformation products and then also.

00:17:20.040 --> 00:17:20.630
Newton, Seth
Uhm.

00:17:22.120 --> 00:17:28.330
Newton, Seth
This might be a good application for affects directed analysis, Neil and I don't know if you agree with that.

00:17:29.880 --> 00:17:32.370
Newton, Seth
Chemical transformation similarity thank you Tony.

00:17:33.490 --> 00:17:35.010
Newton, Seth
So I think UM.

00:17:36.000 --> 00:17:40.220
Newton, Seth
Yeah, that I think we could apply both of those in this situation.

00:17:42.140 --> 00:17:57.310
Newton, Seth

Ex. 5 Deliberative Process (DP)

00:17:59.090 --> 00:18:16.270
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:18:17.430 --> 00:18:29.290
Ulrich, Elin
We've been trying to migrate that more away from humans, not away from humans. But in addition to humans, which generally tends to be where that's focused to add the ecological aspects of that.

00:18:30.580 --> 00:18:40.390
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:18:41.920 --> 00:19:11.980
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:19:12.030 --> 00:19:22.600
Ulrich, Elin
Uh good priority and I think both of the the things that Seth has called out are really good uses of our non targeted analysis tools and.

00:19:24.460 --> 00:19:26.990
Ulrich, Elin
Good case studies for us.

00:19:28.300 --> 00:19:44.140
Ulrich, Elin
Like you said the chemical transformation simulator if I got that acronym correct is definitely something that would be of great use to test out at this particular site. The good news is we know pretty well, what the starting materials were so that helps.

00:19:44.590 --> 00:19:50.750
Daniel Snow
Yeah, I was gonna add I see in the chat window. They're looking for what what to expect there. There was some.

00:19:51.700 --> 00:20:05.710
Daniel Snow
Laboratory tests and the wastewater whole suite of compounds. We've been trying to tabulate that so we have a pretty good data set on on the public data. That's available on the compounds that were measured in the wastewater.

00:20:07.440 --> 00:20:13.930
Daniel Snow
It includes the Neo Nicks Struggler and fungicides. Some Basil fungicides as well as some herbicides.

00:20:17.030 --> 00:20:25.180
Daniel Snow
Another question I see is Nebraska game and parks. Yes, they have been involved in this more from a wildlife.

00:20:26.290 --> 00:20:45.740
Daniel Snow
Exposure and maybe responding to inquiries about livestock or wildlife deaths. We've had a few reports of save raccoons. Beavers birds other animals that have been found dead and possibly related to exposure.

00:20:50.590 --> 00:21:12.110
Ulrich, Elin
Yeah, I think if we start down the path of transformation products and I'm jumping around a little bit 'cause. I'm reading the chat box. It you know, we'll need to definitely get some further information about what the Neo Nicks exactly where what the fungicides exactly were, and then can start working through predictions and looking for those things with the high resolution mass spectrometry.

00:21:12.860 --> 00:21:44.570
Ulrich, Elin
There was another question from Adam be Alice about the effects directed analysis and and what do we mean by that I think a lot of us mean different things. By that we've got a lot of omics techniques. That could be leveraged for this and that would be could be helpful for tracing where things are going so for seeing effects rather than doing the chemical analysis. We can do more of a bioassay type analysis to see whether those things are still in those samples and.

00:21:44.630 --> 00:21:53.990
Ulrich, Elin
Would be causing an effect so we could come at that from a couple of different angles. And like I said, we've got a number of different omics techniques transcriptomics genomics.

00:21:54.560 --> 00:22:01.080
Ulrich, Elin
Uhm I won't be able to think of all of them so I apologize if I haven't named your favorite one, but

00:22:02.180 --> 00:22:26.680
Ulrich, Elin
in our labs, we've done a little bit of work with a transcription factors as well. We have a contractor that can help with some of that type of work. So I don't think anything is off the table as far as effects directed analysis, so Adam if you want to chime in with your favorite technique, please. Feel free to describe that and see if that would be of interest to Dan and Shannon and helpful and what they're trying to do.

00:22:28.440 --> 00:22:30.470
Biales, Adam
Well, just to clarify my question.

00:22:31.680 --> 00:22:44.590
Biales, Adam
So a lot of times when people refer to eda there. At least in in Europe. They're talking about a kind of interplay between fraction chemical fractionation and then usually cell based assays.

00:22:44.650 --> 00:22:47.020
Biales, Adam
This is a tip to target specific.

00:22:48.530 --> 00:22:58.640
Biales, Adam
Responses are pathways, our group has developed or is in the process of developing a A Library of Transcriptomic.

00:22:59.270 --> 00:23:07.190
Biales, Adam
Responses that are indicative of certain phenotypes or chemical exposures or what have you and then we can.

00:23:08.290 --> 00:23:37.860
Biales, Adam
Our heart, we, we've been hoping to align that with the non targeted analysis in this sort of EDA framework of fractionation and and to get at which fractions or bio active and in which components of those fractions are are are are driving toxicity and then how and what modes of action are active so that's I think, but what I have in my mind, but I didn't know if Seth had something more. View all in in your own side. Conversation Zealand and Seth and and John if you guys had something specific in in mind when you.

00:23:37.920 --> 00:23:38.670
Biales, Adam
Mention 88.

00:23:42.660 --> 00:23:45.960
Ulrich, Elin
Yeah, I don't think we have any specific ideas in mind, I think.

00:23:43.090 --> 00:23:43.430
Blackwell, Brett
Yeah.

00:23:47.570 --> 00:24:02.710
Ulrich, Elin
That that anything is possible and we're trying to incorporate more omics techniques and cross omics techniques. Multiple omics techniques and what we're doing with the non targeted analysis, so we definitely be interested in partnering up.

00:24:03.340 --> 00:24:10.800
Ulrich, Elin
To do that kind of stuff does that sort of work lend itself to what you're thinking about Dan and Shannon.

00:24:05.860 --> 00:24:06.750
Blackwell, Brett
And and to.

00:24:11.660 --> 00:24:18.010
Daniel Snow
Yeah, I don't know if we have anyone that Shannon do you know anybody. Dude, that's doing the genetic any genetic work on these samples?

00:24:19.170 --> 00:24:19.630
Shannon Bartelt-Hunt
No.

00:24:19.270 --> 00:24:21.050
Daniel Snow
I don't I don't think we do so.

00:24:20.310 --> 00:24:20.660
Shannon Bartelt-Hunt
No.

00:24:21.380 --> 00:24:22.010
Shannon Bartelt-Hunt
Let me know.

00:24:22.270 --> 00:24:23.310
Daniel Snow
It's wide open.

00:24:23.950 --> 00:24:28.320
Ulrich, Elin
Is that good or bad that you don't have anyone working on it and that's all we can fill?

00:24:26.920 --> 00:24:27.270
Daniel Snow
Ah.

00:24:28.460 --> 00:24:35.090
Daniel Snow
Not even toxicology is obviously something that should be done here, but we just don't have the we don't have the manpower.

00:24:32.520 --> 00:24:33.010
Ulrich, Elin
OK.

00:24:37.190 --> 00:24:37.770
Shannon Bartelt-Hunt
And.

00:24:37.500 --> 00:24:40.220
Blackwell, Brett
Yeah, into parallel with that, we have.

00:24:41.040 --> 00:24:44.360
Blackwell, Brett
Other in vivo assays at our lab here in Duluth, Minnesota.

00:24:45.090 --> 00:24:52.000
Blackwell, Brett
I'm doing high throughput assays with 4 different ecologically relevant species so that could.

00:24:53.010 --> 00:25:03.700
Blackwell, Brett
Thinking of ways with what Adam just proposed if we can all be working from the same water samples extracts from samples that can be characterized by Ilan Group.

00:25:04.630 --> 00:25:05.320
Blackwell, Brett
And then

00:25:06.110 --> 00:25:10.870
Blackwell, Brett
our group in Adams group can be doing some of the echo assessments, the effects assessments.

00:25:11.520 --> 00:25:14.380
Blackwell, Brett
That would be ideal just trying to keep this coordinated so.

00:25:15.100 --> 00:25:21.680
Blackwell, Brett
The analytical effort that's going to be considerable. I assume can be applied to multiple projects.

00:25:25.500 --> 00:25:35.500
Shannon Bartelt-Hunt
Uhm I see Tom had a question in that chat about bee die offs and I think to fully answer that question, we would need to connect you with Judy.

00:25:36.290 --> 00:26:03.680
Shannon Bartelt-Hunt
But I think kind of in general, she is has been monitoring hives on a University property just adjacent to the facility for a number of years and then also I think this year. Did some other place. Some other hives within the community. I'm not exactly what you're what data she was collecting but I'm sure she was you know, she was monitoring their very closely.

00:26:05.550 --> 00:26:12.510
Shannon Bartelt-Hunt
She also had some sort of paired hives that she was placing in sort of control areas.

00:26:12.760 --> 00:26:15.490
Shannon Bartelt-Hunt
Uhm for lack of a better word outside of.

00:26:17.720 --> 00:26:23.210
Shannon Bartelt-Hunt
You know in some Prairie environments that would be not impacted by crop production.

00:26:23.800 --> 00:26:24.490
Shannon Bartelt-Hunt
Uhm.

00:26:25.850 --> 00:26:39.830
Shannon Bartelt-Hunt
Or obviously the Alton facility, so we could we could connect you with her, but she has. I think probably at this point for 5 or more years of data on effects to the to be colonies.

00:26:42.830 --> 00:26:43.040
Minucci, Jeffrey
Yeah.

00:26:43.090 --> 00:26:57.420
Minucci, Jeffrey
Yeah, on the on the topic of the B exposure and effects. Tom Krueger and I have been working with Office of pesticide programs and USDA to develop a honeybee colony simulation model for pesticide risk assessments.

00:26:58.540 --> 00:27:11.470
Minucci, Jeffrey
Uh we've actually fit that to Munich data before, but in a more controlled setting in Colombia. Feeding studies and I think this could be a really good opportunity to try to apply that model and more of a kind of true field setting.

00:27:12.100 --> 00:27:12.590
Shannon Bartelt-Hunt
Yep.

00:27:12.310 --> 00:27:34.160
Minucci, Jeffrey
So yeah, we'd be interested in you know what kind of environmental measurements. We can get in Unix and especially in pollen and nectar and hive matrices and then it sounds like there could be a really great data set of colony observations and so there could be a great chance to kind of see how our model predicts the you know what kind of hazard it predicts for honey bees?

00:27:34.850 --> 00:27:35.200
Shannon Bartelt-Hunt
Uh-huh.

00:27:36.400 --> 00:27:42.260
Minucci, Jeffrey
Also in the next planning cycle. We're interested in expanding our research into native bees a bit more.

00:27:42.310 --> 00:28:00.100
Minucci, Jeffrey
Or so that's just one possibility would be to like put out hive traps for native bees. Yeah, close to the facility and kind of in those control sites that you might have established already and see if there's been any effects on native be counts and diversity.

00:28:04.990 --> 00:28:08.260
Ulrich, Elin
Sounds like we need to make a connection with Judy and then let you guys run.

00:28:08.470 --> 00:28:09.100
Shannon Bartelt-Hunt
Uh-huh.

00:28:08.750 --> 00:28:09.030
Daniel Snow
Now.

00:28:11.250 --> 00:28:12.060
Purucker, Tom
That would be great.

00:28:17.860 --> 00:28:18.380
Brunelle, Laura
Yeah.

00:28:18.540 --> 00:28:41.780
Brunelle, Laura
So back onto the nontarget analysis side Angela Bat, an eye over the last year. One of our kind of big things we've been doing is creating an in house database with standards and about 900 of these right now are pesticides. Insecticides herbicides and their degradation products about a 3rd of the 900 or degradation products so I think there could be a good fit in for.

00:28:42.680 --> 00:28:47.780
Brunelle, Laura
Uhm kind of getting a larger picture of what's happening outside of the?

00:28:48.800 --> 00:28:50.190
Brunelle, Laura
The fungicides you're targeting.

00:28:53.570 --> 00:29:07.700
Daniel Snow
Yeah, I I see that the structures of some of the transformation products that are in that image. Where we're running about 3/4 of those transformation products for the Danio nicotine noise right now in our triple quad method.

00:29:09.640 --> 00:29:31.660
Williams, Antony
Yeah, so I'm I'm putting a lot of information in there in terms of soon as we can get hold of the chemicals that you think are present. Maybe work with you to to help pull some of that together. If we can. And then in a format that. Everyone can get access to then we can prep on our side for some of the non target analysis work in terms of making sure we've got everything registered everything preprocessed.

00:29:33.120 --> 00:29:41.060
Williams, Antony
There is from informatics work to prepare on our side. In theory, we may actually have it all. We don't know until we know what the list is.

00:29:45.680 --> 00:30:02.290
Ulrich, Elin

So Laura I think you and Angela and and the folks in RTP should coordinate pretty heavily for the non targeted work to make sure that if if we're picking any of this up that we aren't duplicating efforts. It may be wise to divide and conquer by.

00:30:03.820 --> 00:30:33.920
Ulrich, Elin
By Matrix, it might be smarter to divide and conquer by compound class will have to just kind of figure that out. I know you guys are doing more water work. We do somewhere to work in RTP, but are matrices tend to veer a little bit more on the human exposure side than the ecological so things like dust and and whatnot might be a little bit easier for us to handle so yeah, we, we need to think about this a little bit and coordinate.

00:30:34.160 --> 00:30:52.480
Ulrich, Elin
Uh because we do have multiple laboratories, doing similar kinds of work and I'd encourage Adam and Bret to make sure that their work is complementary. I don't think there's any overlap there. But we want to make sure that it's very complementary and that the data can be.

00:30:52.770 --> 00:31:00.090
Ulrich, Elin
Uhm married together at the end to tell really compelling story if if things move forward the way I hope they will.

00:31:01.510 --> 00:31:02.070
Ulrich, Elin
So.

00:31:03.460 --> 00:31:10.600
Ulrich, Elin
I have not heard or seen too much chatter from an air side and I know that.

00:31:10.650 --> 00:31:21.030
Ulrich, Elin
Uhm as we were hearing from Shannon and Dan. They're interested in atmospheric occurrence and transport and interest in that for for human exposure.

00:31:21.580 --> 00:31:40.030
Ulrich, Elin
Uhm I know there's other air sampling going on for different reasons. This would be obviously more for the the primary chemicals that were applied to the seed corn and have gotten off of the facilities property and things like that so.

00:31:40.890 --> 00:31:46.440
Ulrich, Elin
Anybody have thoughts on the airside fate and transport modeling etc.

00:31:55.300 --> 00:32:10.350
Purucker, Tom

API general uses a very quite simple set like for Pesti Restoration very simple setup drift assumptions with the ACT drift models. There is more complexity, there that can be run to handle.

00:32:11.240 --> 00:32:25.650
Purucker, Tom
Sort of spatial temporal aspects of it, but there are like a conservative set of assumptions that can be done. But it's usually from aerial type applications is not quite clear the how that would relate to.

00:32:26.720 --> 00:32:28.510
Purucker, Tom
Seek treatment waste stored here.

00:32:31.310 --> 00:32:36.710
Shannon Bartelt-Hunt
Yeah, I think that's been our big question is, I think what we're what we would like to simulate is.

00:32:37.310 --> 00:32:47.290
Shannon Bartelt-Hunt
Uhm transport via dust from or fine particles from these really large what kick piles that have basically been sitting out for several years.

00:32:52.150 --> 00:33:00.520
Purucker, Tom
Yes, now we require like a wind rose and and some you know when the last day data and probably some simple physics types are self assumptions?

00:32:56.760 --> 00:32:57.130
Shannon Bartelt-Hunt
Uh-huh.

00:33:02.910 --> 00:33:29.180
Ulrich, Elin
I know we've got plenty of folks in RTP that do their work, but I don't know if this is the kind of stuff that that they would be able to handle, and whether any of those folks that could point us in the right direction for EPA researchers or on this call so we can continue to to reach out on that side 'cause. It's definitely not my area. And if we haven't hit the right people. Yet it might be kind of hard to.

00:33:29.890 --> 00:33:32.500
Ulrich, Elin
To have a real productive conversation on that today.

00:33:33.290 --> 00:33:36.740
Ulrich, Elin
So and you know this is one of those things where.

00:33:38.270 --> 00:33:42.940
Ulrich, Elin
We may be able to help in some aspects and not in others, and I think that's OK.

00:33:45.190 --> 00:34:05.960
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:34:07.930 --> 00:34:11.670
Ulrich, Elin
We've talked a little bit about samples and UM.

00:34:12.990 --> 00:34:19.540
Ulrich, Elin
One of the things I think it's important to reiterate is it sounds like UNL has samples from.

00:34:20.350 --> 00:34:21.170
Ulrich, Elin
Off site.

00:34:22.190 --> 00:34:29.990
Ulrich, Elin
And areas that could be impacted not from the site specifically and so I think that's a really important distinction to make.

00:34:31.100 --> 00:34:33.280
Ulrich, Elin
And to set our expectations.

00:34:34.040 --> 00:34:35.010
Ulrich, Elin
Realizing that.

00:34:35.780 --> 00:34:45.080
Ulrich, Elin
Come and it does sound like I know you guys have collected a number of different samples already and you know the good and the bad thing about the environment is it's.

00:34:46.120 --> 00:34:52.030
Ulrich, Elin
It's it's not consistent so if you've already sampled and we needed new samples they would be different samples.

00:34:53.190 --> 00:35:07.730
Ulrich, Elin
So that's good from the interesting science aspect. It's bad from there. We can't go back and and sample? What we had before if we need more of something so setting those expectations reasonably. I think would be pretty important.

00:35:14.020 --> 00:35:17.130
Shannon Bartelt-Hunt
I was just gonna add up on the sampling front data.

00:35:18.430 --> 00:35:30.720
Shannon Bartelt-Hunt
Continued issue is the site itself is not at all static so there's been a couple of large rain events that have caused flooding and that so I mean, it's just it's still a very dynamic.

00:35:31.520 --> 00:35:35.910
Shannon Bartelt-Hunt
System and with the waste liquid and solid waste still on site.

00:35:37.080 --> 00:35:37.720
Shannon Bartelt-Hunt
There's no.

00:35:38.390 --> 00:35:56.910
Shannon Bartelt-Hunt
Lack of a source for these materials so it's not even a situation where it like it's all cleaned up and we're just trying to see what's happening. It's still really dynamic and they're still continues to be a man. I don't call it discharges, but it seems that runoff. Yeah, that's that's coming from this angle.

00:35:53.540 --> 00:35:53.900
Daniel Snow
Run off.

00:36:02.800 --> 00:36:09.150
Daniel Snow
One thing with the error. I I was, I was hoping to do this when we first were aware of the issue but.

00:36:10.800 --> 00:36:26.450
Daniel Snow
Residents have reported a really strong odors related to application and storage of this wet cake and I was hoping through sampling and maybe someone targeted GCMS to try to identify some of the compounds that might be causing this odor.

00:36:27.060 --> 00:36:31.790
Daniel Snow
It's not something that you have interest in I. I would be really happy to help with that.

00:36:27.100 --> 00:36:27.350
Ulrich, Elin
Yeah.

00:36:32.100 --> 00:36:49.850
Ulrich, Elin
That's already underway through the work that's going on internal to EPA and I don't know whether we

want I. I suspect it might be a bad idea to try to cross lanes. As far as that goes that's a little bit more on the regulatory side of the House and we're certainly helping out with that.

00:36:33.820 --> 00:36:34.160
Daniel Snow
OK.

00:36:50.080 --> 00:36:50.450
Daniel Snow
OK.

00:36:50.960 --> 00:37:08.090
Ulrich, Elin
But I I don't know if we wanna try and mix. Those 2 things together. But I we've we've already heard about the odor issues and the reason Seth pop back on is because he's planning on doing some of that, so if you wanna give our real brief update on that set that might be helpful.

00:36:59.330 --> 00:36:59.670
Daniel Snow
OK.

00:37:08.680 --> 00:37:24.850
Newton, Seth
Uh yeah, so we're coordinating with Michael Davis at Region 7 and they're planning on going to take some thermal desorption and summa canister samples as soon as they can get their hands on some.

00:37:25.490 --> 00:37:55.060
Newton, Seth
Uh the proper sampling equipment, I guess it's on back order. But yeah, it sounds like early next year. We might be getting some of those samples and will be running them on our high resolution mass spec and trying to do non targeted analysis with the aim of identifying the the odor specifically and then any of that data can follow feed into this future work. But that's kind of meant to be more of an immediate.

00:37:40.970 --> 00:37:41.320
Daniel Snow
OK.

00:37:51.530 --> 00:37:51.820
Daniel Snow
K.

00:37:55.820 --> 00:38:04.590
Newton, Seth
A quick response project and what we're talking about here is kind of long term longer term, research as far as I understand it.

00:38:05.100 --> 00:38:05.480
Daniel Snow
OK.

00:38:05.970 --> 00:38:06.210
Newton, Seth
Yeah.

00:38:09.260 --> 00:38:21.970
Purucker, Tom
Honda circle back to Tony 's question into chat about the source pesticides that you said before you're taking seek treatment from like all over the country and it's kind of hard to find obviously lists of.

00:38:22.700 --> 00:38:34.180
Purucker, Tom
The inert ingredients but even of the active ingredients do you guys have some sort of complete list of the ingredients that are approved in the US for OK? It might be something that we go to.

00:38:34.240 --> 00:38:36.900
Purucker, Tom
Yeah, so our Press, I program for.

00:38:37.090 --> 00:38:40.460
Daniel Snow
I actually tried to get that for a talk that I gave at sea tac.

00:38:41.900 --> 00:38:50.640
Daniel Snow
Was it University Wisconsin? I think has a pretty decent? List of active ingredients and seed treatment. But it's not complete. I'm sure of it.

00:38:53.220 --> 00:38:53.970
Purucker, Tom
OK thanks.

00:39:05.150 --> 00:39:09.240
Daniel Snow
Uh Mullin so this sounds like there's a lot of different components of this.

00:39:10.040 --> 00:39:22.200
Daniel Snow
That are that are building how how can we help coordinate all of the pieces 'cause that's something even with our small group. I think we're struggling with is the coordination part of it.

00:39:23.380 --> 00:39:55.110
Ulrich, Elin
Yeah, UM one thing that might be wise to do is to set up a teams page for this work. We've used that for a combination of both internal EPA and external work in the past and that has not caused this technical issues that doesn't necessarily mean it's the end all, be all but that might be a good place to compile some information and continue discussions and to to.

00:39:55.430 --> 00:39:56.680
Ulrich, Elin
To make sure that.

00:39:57.490 --> 00:40:02.290
Ulrich, Elin
Ducks are as as heard it as they could be your cats or as heard it as they can be.

00:40:02.340 --> 00:40:03.590
Ulrich, Elin
The UM.

00:40:02.810 --> 00:40:03.110
Daniel Snow
Yeah.

00:40:04.460 --> 00:40:34.790
Ulrich, Elin
I would love to turn this over to individual researchers to coordinate but I think that it's probably gonna help to have somebody with a bit of an overarching perspective and I don't know whether the right person for that is me. I don't know whether the right person for that might be Candace since she's in the region and really knows what's going on. On the site and all of the Nebraska work. That's going on all the regional works. It's going on. I don't know if it's fair to ask her to help.

00:40:34.830 --> 00:40:38.610
Ulrich, Elin
Coordinate all the OR do you work that might be going on as well so?

00:40:39.780 --> 00:40:41.430
Ulrich, Elin
Yeah, I think.

00:40:42.820 --> 00:41:08.300
Ulrich, Elin
Yeah, it's gonna be a very interesting coordination attempt. I think that for some things like the non targeted work and trying to coordinate that with both the daluiso mix work and the Cincinnati Omics work that Adam was talking about. I think that's fairly easy for us to coordinate internally because we're already talking to these people.

00:41:08.350 --> 00:41:18.080
Ulrich, Elin
Well, but for some of the other pieces that that might get a little further flung and and hard to to manage so like Tom and.

00:41:18.430 --> 00:41:41.270
Ulrich, Elin
Uhm Jeffs work with the bees and potentially some of the air work. That's pretty well outside my area of expertise and so while I could help make sure the right people are talking to one another. That's not

something that I would be able to to coordinate terribly terribly well so I would be happy to set up a team site if folks think that would be useful.

00:41:42.120 --> 00:42:10.950
Ulrich, Elin
And make sure that everybody gets an invite and then you can invite yourself if this is not of interest to you. I think if we I think the the biggest deal is to maintain communication and that goes for both our efforts with you guys as well as making sure that the region is involved and understands and that they can make sure that there are no surprises with NDE as well. So I think that's that's going to be the key component.

00:42:11.930 --> 00:42:15.100
Ulrich, Elin
To make sure that those communications are inclusive.

00:42:15.890 --> 00:42:19.190
Ulrich, Elin
Of the folks that need to know so that we aren't getting any surprises.

00:42:20.080 --> 00:42:22.450
Beringer, Mike
Hey Lynn, it's Mike Barringer from Region 7.

00:42:22.720 --> 00:42:23.390
Ulrich, Elin
Thank you.

00:42:23.980 --> 00:42:52.730
Beringer, Mike
Yeah, I'm not sure Candace is necessarily the right person. You know, we'll have to discuss internally who would be the right point of contact. Whether that's me Aurelia Dora, who's our science liaison here in Region 7 or D Science Liaison. So 'cause Candace is really she's been our primary point of contact, but primarily from the enforcement and compliance perspective and we've been working with NDE and the facility, so probably doesn't make sense for her to be that point of contact, but

00:42:34.910 --> 00:42:35.170
Ulrich, Elin
Hey.

00:42:52.790 --> 00:42:59.700
Beringer, Mike
we need to talk internally, then of course will follow up and figure out who that individual will be and I'll get back with you.

00:43:00.380 --> 00:43:18.540
Ulrich, Elin
Yeah, and obviously like I said, You know, we, we have to make sure that our national program.

Directors are NP dies or in the loop and all of that kind of stuff. So I don't know even within CCTE 'cause. Most of us are within the Center for computational toxicology and exposure, although not all.

00:43:19.550 --> 00:43:37.660
Ulrich, Elin
But maybe it makes sense to have somebody within CCTV. Try and take a lead and coordinate this at a a bit higher level. Maybe in RRPS Office and I think that's research planning and implementation staff. I hope I got them right.

00:43:38.590 --> 00:43:59.550
Ulrich, Elin
So we'll need to talk internally to see who the best person is to coordinate from there or decide who the best person to coordinate from the Region 7 side and then maybe those would be really good points of contact initially and then you know, obviously we're going to have to have scientists to scientists meetings as well. But if we can have those folks present just so that again. There are surprises that would help.

00:44:00.170 --> 00:44:01.300
Ulrich, Elin
Yeah, UM.

00:44:01.950 --> 00:44:12.620
Ulrich, Elin
Jeff brings up a really important question about a war proposal. And I have no idea what roar stands for anymore. But regional is the important part of that acronym.

00:44:13.260 --> 00:44:17.940
Ulrich, Elin
Uhm where we often collaborate with regional staff.

00:44:19.040 --> 00:44:21.320
Ulrich, Elin
And Ord combined.

00:44:22.530 --> 00:44:29.960
Ulrich, Elin
To further some research questions and iCloud or as got her hand up so please.

00:44:33.660 --> 00:45:00.440
Chamberlain, Eliodora
Thanks, Dylan. I appreciate that, yeah, so the roars regional or D Applied Research, which is the new rare re season are stiff all combined into one. I won't go over those but anyways. There's so there's 3 tracks under regional track. The Osage track, which is dedicated for EJ climate change innovations projects and impacts to communities and then also the sustainable and healthy communities track.

00:45:00.970 --> 00:45:01.640
Chamberlain, Eliodora
Uhm.

00:45:02.810 --> 00:45:13.350
Chamberlain, Eliodora
We do have a deadline for submitting a proposal concept idea, which is due December 10th and that entails meaning there needs to be a regional lead for the project.

00:45:13.980 --> 00:45:31.580
Chamberlain, Eliodora
Uhm to sip to fill out a notice of intent form with me and then also the December 10th for webform for Ord. UM at this point in time. So there's different milestones under or right now, it's just a proposal concept idea for December 10th.

00:45:32.180 --> 00:45:50.700
Chamberlain, Eliodora
And then the draft proposal would be due January 15th and then the final proposal is due February 11th so all that is within a very short time frame. I don't know, especially with the Holidays coming up. I don't know what people capacities are to do all of that.

00:45:51.210 --> 00:45:59.380
Chamberlain, Eliodora
Uhm if it's something to consider then just so that people who are not familiar with the war program. It is competitive.

00:45:59.970 --> 00:46:30.460
Chamberlain, Eliodora
Uhm so it doesn't necessarily mean that if a proposal is submitted that one that it would be selected. So, just kind of keep that in mind, and they're depending on the track. There are funding limitations as well. So the budget would also play our role on whether it fell under or and going back to The Who would be the lead. If it was a roar, then the regional person who submits it for a broke.

00:46:30.850 --> 00:46:35.170
Chamberlain, Eliodora
Project would be the lead on this on this proposal.

00:46:35.480 --> 00:46:40.730
Chamberlain, Eliodora
Uhm slash project so I don't know if that helps clear things up all that in a quick nutshell.

00:46:43.300 --> 00:46:55.370
Ulrich, Elin
That does help the The thing that I think is most key is that Ord is involved in those but we don't necessarily propose them and this is a UNL LED effort at the moment.

00:46:56.050 --> 00:47:13.470
Ulrich, Elin
So I'm not quite sure the interplay between all of these different aspects because the samples are are UN else. You know Ord 's thinking about research. I think it's a very reasonable question to ask but we need to make sure that we get a regional person involved really soon.

00:46:57.520 --> 00:46:58.160
Chamberlain, Eliodora
That's

00:47:13.850 --> 00:47:19.920
Chamberlain, Eliodora
right and that actually is an excellent question that you bring up because for the proposal development.

00:47:20.490 --> 00:47:38.130
Chamberlain, Eliodora
Uhm external partners are not allowed in the development process in any way, shape or form, they are brought in during the implementation phase, which is after February. We actually we actually won the project gets selected so we're looking at April.

00:47:38.660 --> 00:47:41.120
Chamberlain, Eliodora
Uh so there there is that?

00:47:42.090 --> 00:47:42.890
Chamberlain, Eliodora
Feeling as well.

00:47:49.050 --> 00:47:51.990
Daniel Snow
So is is it pretty involved writing those proposals.

00:47:54.490 --> 00:48:17.630
Chamberlain, Eliodora

00:48:18.210 --> 00:48:28.700
Chamberlain, Eliodora

Ex. 5 Deliberative Process (DP)

00:48:31.980 --> 00:48:39.280
Chamberlain, Eliodora
And also to add that to increase the palatability if other regions were interested in.

00:48:39.900 --> 00:48:47.430
Chamberlain, Eliodora
Working on this are partnering on this war proposal that increases the desirability or selectability.

00:48:48.200 --> 00:48:49.030
Chamberlain, Eliodora
Uhm.

00:48:49.950 --> 00:48:52.610
Chamberlain, Eliodora
I've heard totally something else, I was gonna mention about that.

00:48:59.140 --> 00:49:03.710
Chamberlain, Eliodora
Yeah, I lost it, but Region 7 would be the lead. Sorry I was, I had it and I lost it.

00:49:03.990 --> 00:49:05.380
Ulrich, Elin
I did that today too.

00:49:06.430 --> 00:49:15.740
Daniel Snow
How about nde could they help I know we've been working pretty closely with a lot of nde folks here and that they would love to see us try to to do more.

00:49:16.120 --> 00:49:22.540
Chamberlain, Eliodora

00:49:24.810 --> 00:49:32.260
Ulrich, Elin
So it sounds to me, so one thing that's probably important to to point out is we've had several regional.

00:49:33.290 --> 00:49:51.250
Ulrich, Elin
Research programs before rare ressies etc. I won't go into details on though, 'cause they've all been rolled into this war process and this is the first year. It was probably rolled out a month ago and we were made aware of the fact that that was how such things would happen now.

00:49:52.860 --> 00:50:10.210
Ulrich, Elin

00:50:11.040 --> 00:50:36.170
Ulrich, Elin

00:50:37.700 --> 00:50:54.080
Chamberlain, Eliodora
Yeah, so that was the other piece about it also had to be one of the regions science needs and priorities and in the chat box. I did mention that we are currently collecting that information and so sued Dempsey from Nebraska Department environmental.

00:50:54.150 --> 00:50:59.380
Chamberlain, Eliodora
There are other vermin energy is collecting that information so if this is a.

00:51:00.690 --> 00:51:04.860
Chamberlain, Eliodora
Science needed priority for the state of Nebraska, then you need to send that to her.

00:51:04.920 --> 00:51:05.190
Chamberlain, Eliodora
Sure.

00:51:05.680 --> 00:51:15.660
Chamberlain, Eliodora
All of the lists for each state and the tribal nations as well as the regional office. Those needs and priorities will be cross cutting too, for a short list.

00:51:16.160 --> 00:51:32.340
Chamberlain, Eliodora

Ex. 5 Deliberative Process (DP)

00:51:32.560 --> 00:51:35.320
Ulrich, Elin
Yeah, so it's Sue EPA.

00:51:33.010 --> 00:51:34.160
Chamberlain, Eliodora
Uhm it.

00:51:35.940 --> 00:51:37.230
Chamberlain, Eliodora
Sue is NDE.

00:51:37.420 --> 00:51:38.490
Ulrich, Elin
OK, OK.

00:51:37.530 --> 00:51:37.740
Daniel Snow
Yeah.

00:51:38.020 --> 00:51:43.010
Chamberlain, Eliodora
Sue Dempsey, yeah, so she is your contact and she's collecting that information now.

00:51:43.130 --> 00:51:43.940
Ulrich, Elin
OK great.

00:51:44.100 --> 00:51:44.380
Chamberlain, Eliodora
Yeah.

00:51:44.550 --> 00:51:53.770
Ulrich, Elin
We would probably not want to reach out to her. I think we would want to reach out to our regional people to to make sure that we aren't crossing anymore.

00:51:54.170 --> 00:52:04.090
Chamberlain, Eliodora
Well, but she still needs to collect that information to one way or the other, yeah, so please. Please send that to her 'cause that'll help the cause so to speak up.

00:51:57.180 --> 00:51:58.210
Ulrich, Elin
Oh sure sure.

00:52:03.780 --> 00:52:10.480
Ulrich, Elin
Yeah, I I think it would make sense for maybe the region to to interface with Sue rather than Ord.

00:52:11.040 --> 00:52:23.220
Chamberlain, Eliodora
Oh, I'm sorry, Ellen Ellen not you I mean. Sorry it would be Dan and Shannon and others in the state of Nebraska, who are not EPA to reach out to Sue sorry. I did not clarify that.

00:52:17.730 --> 00:52:18.120
Ulrich, Elin
Great.

00:52:23.360 --> 00:52:26.120
Ulrich, Elin
That makes far more sense excellent thank you.

00:52:26.650 --> 00:52:36.820
Daniel Snow

00:52:36.420 --> 00:52:36.990
Shannon Bartelt-Hunt
1.

00:52:37.250 --> 00:52:43.990
Chamberlain, Eliodora
No, you would send her the science need in priority, so this project would be one of them.

00:52:44.300 --> 00:52:44.690
Daniel Snow
OK.

00:52:44.560 --> 00:52:56.970
Chamberlain, Eliodora
Uhm not necessarily putting in roar 'cause that really it. It doesn't help or hurt, your cause. But getting it on the list for the state of Nebraska is what you really want it to do.

00:52:45.350 --> 00:52:45.700
Shannon Bartelt-Hunt
K.

00:52:51.220 --> 00:52:51.560
Daniel Snow
OK.

00:52:56.480 --> 00:52:59.940
Daniel Snow
I bet somebody is already done that. But I'll check with Sue and find out.

00:52:56.610 --> 00:52:57.040
Shannon Bartelt-Hunt
Got it.

00:53:00.290 --> 00:53:00.770
Chamberlain, Eliodora
OK.

00:53:03.970 --> 00:53:12.720
Daniel Snow
Because you know, there's been a lot of people really up in arms about getting some action on this so it would be. I would be surprised if she hasn't already have this on your list.

00:53:15.920 --> 00:53:28.190
Daniel Snow
That that relates to another topic, and you may or may not know, but we've been sort of scratching our heads to find other sources of funding to keep our efforts going we, we are working off of A.

00:53:29.010 --> 00:53:33.700
Daniel Snow
Seed grant that was supplied to our.

00:53:35.650 --> 00:53:36.560
Daniel Snow
What's it called?

00:53:37.630 --> 00:53:39.080
Daniel Snow
Shannon I can't figure that.

00:53:40.260 --> 00:53:40.860
Daniel Snow
Who?

00:53:41.610 --> 00:53:42.400
Shannon Bartelt-Hunt
It was through.

00:53:41.750 --> 00:53:43.090
Daniel Snow
What is the part funding?

00:53:43.200 --> 00:53:51.940
Shannon Bartelt-Hunt
Yeah, it's it's a a donor so it's philanthropic funding through the the University foundation through the yeah.

00:53:47.160 --> 00:53:47.410
Daniel Snow
Yeah.

00:53:50.370 --> 00:53:50.970
Daniel Snow
Foundation.

00:53:51.020 --> 00:54:16.210
Daniel Snow
Yeah, well. That's all we have so far to fund what we're doing now. I know Judy applied for and got some USDA. A multistate hatch funds to to work more on the ecological side. But we're you know to do a good job. We really need a little bit more money to do the environmental site assessment side of things and we're we're looking for places to to apply.

00:54:17.400 --> 00:54:28.300
Ulrich, Elin
Yeah, I know that there was a big infrastructure. Tight bill that recently got past I have no idea if that kind of funding would be applicable here.

00:54:28.870 --> 00:54:32.190
Ulrich, Elin
Uhm I I just don't know enough about it.

00:54:32.240 --> 00:54:44.970
Ulrich, Elin
Uhm we at Ord are not typically 2:00 in the loop about funding opportunities from EPA. But certainly we can keep our eyes and ears open and for us.

00:54:45.620 --> 00:55:01.500
Ulrich, Elin
We would need funding for our own work, and it's unlikely that that would go outside of EPA. But any funding that we get to do research inside, EPA would certainly benefit you guys as well. So we've got another hand up.

00:55:05.930 --> 00:55:18.350
Chamberlain, Eliodora

Ex. 5 Deliberative Process (DP)

00:55:18.950 --> 00:55:24.230
Chamberlain, Eliodora
Uhm the funding for Rory think of it as a gift and award gift card.

00:55:24.870 --> 00:55:48.600
Chamberlain, Eliodora

Ex. 5 Deliberative Process (DP)

00:55:48.990 --> 00:56:18.640
Chamberlain, Eliodora

Ex. 5 Deliberative Process (DP)

00:56:18.800 --> 00:56:36.510
Chamberlain, Eliodora
From the RF request for applications are always coming out there on various different topics. It's it's hard for at least for me to keep track and I just started the job in June, so there's a lot of opportunity there. It's just I can send you the link and you can kind of dig in and see what's available.

00:56:36.900 --> 00:56:37.200
Daniel Snow
K.

00:56:38.720 --> 00:56:53.000
Ulrich, Elin
Now, one of the things that we might be able to work out is if we do wind up receiving more funding. Maybe one of the things that we could work out for UNL is sampling.

00:56:53.720 --> 00:57:24.010
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:57:24.060 --> 00:57:28.400
Ulrich, Elin
To coordinate that so it's beneficial to you guys so.

00:57:30.160 --> 00:57:30.650
Daniel Snow
Great.

00:57:31.430 --> 00:57:49.310
Ulrich, Elin
It is 4:00 o'clock. I can't believe how quickly time when we started getting into or the the conversation really took off and started getting some juices flowing in my own head and and thinking about some things that we need to do so.

00:57:49.720 --> 00:58:20.090
Ulrich, Elin
Uhm I can stick around for a little longer. I don't know if others need to drop off by all means, it's the top of the hour, you're not required. I'll keep recording until everyone is gone. But if folks still have questions or topics. They want to bring up hopefully UNL folks can stick around for another couple minutes. I do want to be reasonable about time well so let's not try to go over by too much more but we can certainly set up additional meetings and have further conversations and I'd encourage folks who are thinking about specific.

00:58:20.150 --> 00:58:30.580
Ulrich, Elin
Work to kind of coordinate with the folks that have been mentioned today, Judy in particular, there was another person, I think it was.

00:58:30.630 --> 00:58:31.400
Ulrich, Elin
Uhm.

00:58:31.520 --> 00:58:32.000
Daniel Snow
Liz.

00:58:32.530 --> 00:58:42.190
Ulrich, Elin
Liz was another one that got mentioned that that we may need to coordinate with on the UNL side, so definitely reach out to those folks and help keep me in the loop.

00:58:42.250 --> 00:59:14.790
Ulrich, Elin

Ex. 5 Deliberative Process (DP)

00:59:14.850 --> 00:59:27.120
Ulrich, Elin
Strong hopes that this will be a great case study for some of the stuff that we've had ongoing so just bear with us. EPA is not fast and most things we have 2 speeds. We needed it yesterday and we'll get to it eventually.

00:59:28.050 --> 00:59:28.900
Ulrich, Elin
Style.

00:59:29.570 --> 00:59:37.580
Ulrich, Elin
Hang in there with us and you know this is an ongoing problem, so I know we're not gonna solve it tomorrow. So hopefully that works out OK.

00:59:38.720 --> 00:59:38.980
Shannon Bartelt-Hunt
Yeah.

00:59:40.750 --> 00:59:45.870
Ulrich, Elin
I'll I'll be quiet again and let other folks chime in if they have anything else that that needs to get asked or answered.

00:59:59.180 --> 01:00:04.860
Ulrich, Elin
I'm not seeing hands raised or folks suddenly show up on camera or unmute so.

01:00:05.860 --> 01:00:08.590
Ulrich, Elin
Any last parting words from University, Nebraska.

01:00:09.190 --> 01:00:16.090
Daniel Snow
But the only other thing I think I mentioned this last time but we're we're working with Michelle Hate Lake at the USPS.

01:00:15.240 --> 01:00:15.630
Ulrich, Elin
Uh-huh.

01:00:16.870 --> 01:00:34.400
Daniel Snow
California water Science Center, so she's been receiving samples for testing along with our laboratory. So we've we've got some support from the USGS on the analysis of biological tissues, and I believe they're doing some groundwater sampling from the area.

01:00:37.270 --> 01:00:40.280
Ulrich, Elin
I know Michelle, a little bit so that's great to hear her name brought up.

01:00:41.240 --> 01:00:42.950
Purucker, Tom
Do you know what biological tissues?

01:00:44.320 --> 01:00:48.300
Daniel Snow
Eggs bird eggs and maybe some tadpoles.

01:00:52.010 --> 01:00:52.490
Purucker, Tom
Thanks.

01:00:54.260 --> 01:00:59.460
Daniel Snow
I don't believe she may be doing bees, but I don't remember Judy ever talking about sending her bees so.

01:01:01.350 --> 01:01:02.990
Daniel Snow
We've done bees here before.

01:01:06.340 --> 01:01:09.580
Daniel Snow
They're not quite as bad as plant tissue, but they're not a whole lot of fun today.

01:01:20.750 --> 01:01:54.690
Ulrich, Elin
Awesome well. Thank you so much again to Dan and Shannon for entertaining are crazy. Wild research ideas and and I really hope that we can collaborate I think this sounds like a really interesting site could be really cool case study for a lot of different things that already is working on so I I've got my fingers crossed that this all works out and we can do some really cool. Science, together, so stay tuned. I I believe that a recording of this will be available shortly. I'll try to figure out how to make sure that folks can listen to the recording.

01:01:44.720 --> 01:01:45.100
Daniel Snow
Let's see.

01:01:55.230 --> 01:02:04.260
Ulrich, Elin
I'll try to clean up my notes. A little bit and send those out to folks. I'll get a team site started and hopefully the conversation just continues and grows from here.

01:02:06.830 --> 01:02:09.380
Daniel Snow
Sounds good. Thanks I appreciate your help.

01:02:09.630 --> 01:02:10.370
Minucci, Jeffrey
Thanks everyone.

01:02:11.170 --> 01:02:12.790
Ulrich, Elin
Thanks guys take care.

01:02:12.600 --> 01:02:12.890
Purucker, Tom
Yes.

01:02:13.210 --> 01:02:13.730
Daniel Snow
Bye.

01:02:14.000 --> 01:02:14.600
Davis, Michael
Thanks. Bye.

01:02:14.210 --> 01:02:14.690
Phillips, Allison
Thanks.